
ENVIRONMENTAL Fact Sheet



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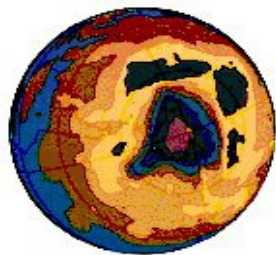
Refrigerants

What are refrigerants?

Refrigerants are chemicals used for cooling in automobile air conditioners, window air conditioners, refrigerators, freezers, water coolers and dehumidifiers. Common refrigerants are chlorofluorocarbons (CFCs), such as R-12, and hydrofluorocarbons (HCFCs) such as R-22. These refrigerants are commonly referred to by the trade name Freon. They have been phased out of air conditioning units and appliances and replaced with R-134a, a compound specifically developed to replace R-12 and R-22.

Why do they need to be disposed of properly?

Refrigerants like R-12 and R-22 are stratospheric ozone depleters. Title IV of the Federal Clean Air Act requires that these chemicals be collected and recovered to minimize their impact on the stratospheric ozone layer. Failure to successfully recover and dispose of R-12 and R-22 results in a release of these chemicals into the atmosphere. Once in the atmosphere, the chlorine from the refrigerant is released and reacts with ozone thereby altering the ozone molecules. This results in thinning of the ozone and increased radiation at ground level. For this reason it is illegal to knowingly vent refrigerants into the environment during installation, repair, or disposal of refrigeration and air conditioning equipment. Spent refrigerants that are not reclaimed or recycled are regulated wastes.



Earth's ozone hole.

Motor vehicle air conditioners refrigerants should be recovered at a salvage yard prior to the disposing or scrapping of an automobile. Unwanted appliances such as refrigerators, freezers, window air conditioners, and dehumidifiers should be brought to a local transfer station or recycling facility. All transfer stations have provisions to recover the refrigerant in these appliances before the appliance is disposed of.

What to do with unwanted products containing refrigerants

For disposal of motor vehicle air conditioners, contact an automotive repair shop to find a US Environmental Protection Agency certified technician available to recover the refrigerant before scrapping the vehicle. For small appliance refrigerant recovery, contact the local transfer station or check the recycling pages in the back of your local phone book to locate someone to recover the refrigerant with EPA certified equipment.

How should refrigerants be collected, managed, and handled for disposal

Recovery - All refrigerants should be recovered from the unit by removing the refrigerant using EPA certified recovery equipment and storing it in an approved container.

Recycling - Recovered refrigerants can be recycled by filtering the refrigerant to remove impurities, such as oil, air, and moisture. Once the refrigerant is purified it can be reused in a repaired air conditioner or appliance.

Reclaiming - Most recovered refrigerants are sent for reclamation where the recovered material is processed, usually by distillation, to remove all impurities and restore it to virgin product specifications.

Disposal - Any refrigerant that is contaminated with other refrigerants and can not be reclaimed must be disposed of as a hazardous waste. For this reason it is imperative that refrigerants are not mixed during recovery.

The facility disposing of the refrigerant must adhere to the following:

- Refrigerants must be recovered prior to crushing vehicles or appliances (white goods).
- Refrigerants shall be removed from all vehicles using EPA certified recovery equipment.
- Refrigerants shall not be vented or otherwise released to the atmosphere.
- Records shall be kept showing the amount of refrigerant recovered, the date of recovery and the final disposition of this material. If the refrigerant has been recovered prior to disposal of the appliance at a transfer station, records must reflect that the refrigerant was recovered prior to receiving the appliance at the facility.
- Refrigerants are stored in tanks that meet US Department of Transportation (DOT) or Underwriters Laboratory (UL) standards. Tanks are labeled according to their contents: "Refrigerant/Freon."
- Recovered refrigerant is sold or transferred only to EPA authorized reclaiming facilities that will reclaim it to its original purity specifications. Only EPA certified technicians can purchase virgin refrigerants. Recovered refrigerants should not be sold to an automobile repair facility.
- All motor vehicle air conditioner repair and recharging must be done by a EPA certified technician.
- The facility should maintain records documenting the volume and final destination of recovered refrigerants.

For more information call the DES Hazardous Waste Compliance Program at (603) 271- 2942. Additionally, you can contact Abdi Mohaumud at EPA Region 1 at (617) 918-1851 or the EPA Stratospheric Ozone Information Hotline at 1-800-296-1996. EPA also maintains a web page for ozone at www.epa.gov/ozone/.